WE CLAIM:

1. A printed, reduced odor packaging material having an interior surface and an exterior surface, the packaging material comprising:

(a) a substrate layer having a uniform thickness;

(b) a printable layer formed on the exterior of the substrate layer, the layers comprising residue arising from a fountain solution; and

(c) a reactive composition capable of reacting with a volatile organic carbonyl compound arising from the residue, to substantially reduce release of the carbonyl compound from the packaging material.

2. The packaging material of claim 1 wherein the substrate comprises a paper or paperboard substrate layer and the printable layer comprises a clay layer.

3. The packaging material of claim 1 wherein the reactive composition is formed in a layer exterior to the cellulosic layer.

4. The packaging material of claim 1 wherein the volatile organic compound arises from an ink residue.

5. The packaging material of claim 1 wherein the residue arising from the fountain solution comprises the reactive composition.

6. The packaging material of claim 1 wherein the cellulosic layer comprises paper with a thickness of about 50 to 305 μm

7. The packaging material of claim 1 wherein the cellulosic layer comprises paperboard with a thickness of 305 to 1015 μm.

8. The packaging material of claim 1 wherein the packaging material comprises an acrylic layer.

9. The packaging material of claim 1 wherein the reactive composition comprises about 30 ppb to 14 wt% of the packaging material.

10. The packaging material of claim 9 wherein the reactive composition comprises a hydrazide compound.

11. The packaging material of claim 9 wherein the reactive composition comprises a guanidine sulfate.

12. The packaging material of claim 9 wherein the hydrazide compound comprises an aromatic hydrazide.

13. The packaging material of claim 12 wherein the aromatic hydrazide comprises benzoic hydrazide.

14. The packaging material of claim 9 wherein the reactive composition comprises urea.

15. The packaging material of claim 9 wherein the reactive composition comprises a mixture of urea and benzoic hydrazide.

16. The packaging material of claim 9 wherein the reactive composition comprises an alkali metal bisulfite.

17. The packaging material of claim 9 having an exterior acrylic layer with a thickness of 2 to 35 microm.

18. The packaging material of claim 1 wherein the substrate layer comprises a first paper layer having a thickness of about 50 to 1200 micrometers, a second printable clay layer having a thickness of about 10 to 100 micrometers, a third ink layer introduced on and into the clay layer in an amount of about 0.5 to 6 grams of ink per square meter of the package material.

19. The packaging material of claim 1 wherein the volatile organic carbonyl compound comprises a C_{5-9} aldehyde or mixture thereof.

20. A fountain solution used in defining an image on a printing plate, the fountain solution comprising a source of a volatile carbonyl compound and:

(a) a major proportion of an aqueous medium;

(b) a water soluble polymer in an amount from about 0.01 to about 1 wt% of the solution;

(c) a pH modifying substance to maintain the pH range from about 2 to about 7;

(d) an effective amount of a surfactant to spread the fountain solution uniformly on a printing plate; and

(e) a reactive composition capable of reacting with the volatile organic carbonyl compound in the fountain solution to substantially reduce the release of the carbonyl compound from the fountain solution.

21. The solution of claim 20 wherein the water soluble polymer is a natural product polymer is present in an amount from about 0.05 to about 0.5 wt% of the solution.

22. The solution of claim 20 comprising about 1 to 40 wt% of the reactive composition.

23. The solution of claim 22 wherein the reactive composition comprises a hydrazide compound.

24. The solution of claim 23 wherein the hydrazide compound comprises an aromatic hydrazide.

25. The solution of claim 24 wherein the aromatic hydrazide comprises benzoic hydrazide.

26. The solution of claim 20 wherein the reactive composition comprises urea.

27. The solution of claim 20 wherein the reactive composition comprises a guanidine sulfate.

28. The solution of claim 20 wherein the reactive composition comprises an alkali metal bisulfite.

29. The solution of claim 20 wherein the volatile organic carbonyl compound comprises a C_{5-9} aldehyde or mixtures thereof.

30. The fountain solution of claim 20 wherein the polymeric substance comprises a natural gum.

31. The fountain solution of claim 30 wherein the natural gum comprises gum arabic.

32. A printing process that can form an image on a flexible substrate using a printing plate having a region with a substantial concentration of a fountain solution and a separate region having a substantial concentration of an ink wherein the fountain solution comprises the fountain solution of claim 20.

33. A printed, reduced odor packaging material, having an exterior surface and an interior surface, comprising a source of a volatile organic carbonyl compound and comprising a first layer comprising a paper substrate having a thickness of about 50 to 1200 micrometers, a second printable clay layer having a thickness of about 10 to 100 micrometers, the clay layer comprising a residue from an ink introduced on and into the clay layer in an amount of about 0.5 to 6 grams of ink per square meter of the package material or from a fountain solution introduced on and into the clay layer in an amount of about 25 to 4000 milligrams of solution per square meter of the package material and a reactive composition capable of reacting with a volatile organic carbonyl compound

arising from the residue, to substantially reduce release of the carbonyl compound from the packaging material.

34. The packaging material of claim 33 wherein the carbonyl compound is an aldehyde.

35. The packaging material of claim 33 wherein the residue arising from the fountain solution comprises the reactive composition.

36. The packaging material of claim 33 wherein the cellulosic layer comprises paperboard with a thickness of 400 to 800 micrometers.

37. The packaging material of claim 33 wherein the cellulosic layer comprises paper with a thickness of 150 to 250 micrometers.

38. The packaging material of claim 33 wherein the reactive composition comprises a hydrazide compound.

39. The packaging material of claim 38 wherein the hydrazide compound comprises an aromatic hydrazide.

40. The packaging material of claim 39 wherein the aromatic hydrazide comprises benzoic hydrazide.

41. The packaging material of claim 33 wherein the reactive composition comprises urea.

42. The packaging material of claim 33 wherein the reactive composition comprises a Grinyard reagent.

43. The packaging material of claim 33 wherein the reactive composition comprises an alkali metal bisulfite.

44. The packaging material of claim 33 having an exterior acrylic layer.

45. The packaging material of claim 33 wherein the volatile organic carbonyl compound comprises a C_{5-9} aldehyde or mixtures thereof.

46. A overcoat solution used as a finish coating in a printed structure, the solution comprising:

(a) a major proportion of an aqueous medium;

(b) a water soluble polymer in an amount from about 10 to about 80 wt% of the solution; and

(c) a reactive composition capable of reacting with the volatile organic carbonyl compound in the fountain solution to substantially reduce the release of the carbonyl compound from the fountain solution, ink, paperboard, claycoat or overcoat.

47. The solution of claim 46 wherein the water soluble polymer is present in an amount from about 10 to about 80 wt% of the solution.

48. The solution of claim 46 comprising about 0.01 to 3.0 wt% of the reactive composition.

49. The solution of claim 48 wherein the reactive composition comprises a hydrazide compound.

50. The solution of claim 49 wherein the hydrazide compound comprises an aromatic hydrazide.

51. The solution of claim 50 wherein the aromatic hydrazide comprises benzoic hydrazide.

52. The solution of claim 46 wherein the reactive composition comprises urea.

53. The solution of claim 46 wherein the reactive composition comprises a mixture of urea and an aromatic hydrazide.

54. The solution of claim 46 wherein the reactive composition comprises an alkali metal bisulfite.

55. The solution of claim 46 wherein the volatile organic carbonyl compound comprises a C_{5-9} aldehyde or mixtures thereof.

56. The solution of claim 46 wherein the polymeric substance comprises an acrylic copolymer.